Company Profile

Control & Automation Solutions
Solutions for Oil & Gas, Petrochemicals and Power
INTECH Process Automation is a globally renowned system integrator and industrial automation company. For over 25 years we have helped major oil & gas companies solve their most pressing issues of instrumentation, control and electrical automation. INTECH’s diversified automation solution portfolio, technical skills, knowledge and expertise on equipment from all major OEMs, and our asset-application specific approach to solution design is what differentiates us from a typical system integrator.
INTECH started as an entrepreneurial venture with three engineers and a single room office. Over the course of more than twenty years, INTECH has transformed into a global organization with 300 employees, 13 regional offices across five continents, 15+ nationalities, and an automation products & solutions portfolio that spans the entire lifecycle of an oil & gas asset.
NTECH has divided its global operations into three geographic regions. Each region is an independent business unit (BU) with its own sales & front-end engineering team. These regions are supported in sales activities through a Solution Center responsible for technical sales support while Central Engineering and Project Control teams help in project design, engineering, and execution.

A QHSE team ensures compliance and adherence to safety and environment regulations for all tasks. The commercial side of sales is supported through a dedicated Marketing department responsible for internal and external messaging and branding. These departments are supported by a corporate function which includes Human Resource, Finance, General Administration, and IT.
All employees at INTECH have elaborate career paths, and training & development plans. From periodically recurring trainings to a well-defined succession plan, INTECH invests heavily in the training, development, and retention of its employees, keeping them abreast of technological developments and industry practices. Engineers at INTECH go through numerous OEM-specific trainings and refresher courses each year. Each engineer goes through over 20 internal and external trainings focused on OEM/vendor systems, industry standards, third party certifications, and HSE trainings.

### Manufacturing Facilities

**Houston**
- 12,000ft² facility with simultaneous manufacturing of up to 60 panels
- Catering to the needs of markets in North America, Central America, South America, and the Caribbean
- Also supports large export jobs heading all over the world
- Approved by Saudi Aramco and Schlumberger
- UL, ISO 9001:2015, and CSIA certified facility

**Dubai**
- 11,000ft² facility, with simultaneous manufacturing of up to 60 panels
- Catering to the needs of markets in Africa, Europe, Central Asia, Middle East, and Asia Pacific
- ISO 9001:2015 certified facility
Typical INTECH Engineer Profile

- Project Managers average 15+ years of industry experience
- Engineers & Designers average 8+ years of industry experience
- Training and hands-on experience on at least four major OEMs’ equipment
- Design and Engineering lead of at least four major projects
- At least 100 formal training hours per year
- PMP trained and certified Project Managers
- CAP and TUV certified engineers

![Engineering Base Growth](chart.png)
INTECH’s Integrated Control Systems bring together control, automation, cybersecurity and power management systems into one powerful solution. Our vendor neutral approach enables clients to use best-in-class components without compromising on the overall cohesion and optimization of their system. As registered integrators with the CSIA, we offer a high level of technical expertise and experience.

The ICS solutions delivered by INTECH cover all phases of a project from engineering and design to procurement, installation and commissioning. We have a proven track record across multiple industries, diverse locations around the world, and with all major ICS vendors.

1. Process Control Systems
2. Safety Instrumented Systems
3. Fire & Gas Systems
4. Power Management & Distribution Systems
5. Instrument Asset Management Systems
6. Cybersecurity
7. Control/Electrical Buildings & MCCs
8. Control, E & I Construction
9. Engineering Study & Design – Control, Electrical, Instrumentation
10. Telecommunication, CCTV & Auxiliary Systems
ICSS Upgrade for 4 Platforms and FSO, Nigeria

The scope of this upgrade covered four production sites and a central FSO. INTECH took on the task of providing Process, Safety, F&G and SCADA systems for 4000+ IOs, and built a triple-modular redundant safety system achieving 99.99% system availability. INTECH also ensured hot spare standbys for PCS and SIS with disaster recovery. Moreover, INTECH provided cybersecurity, alarm management services, and uninterruptible backup power for all facilities.

The project team commissioned all systems as hot cut-over for all sites, completing the handover well within scheduled time.

ICSS and HIPPS for Gas Treatment Plant, Trinidad & Tobago

The customer was setting up new offshore platforms for the field and required a High Integrity Pressure Protection System (HIPPS) to be installed at GEP HP offshore platform located off the east coast of Trinidad.

INTECH was asked to provide Process, Safety and F&G systems alongside a HIPPS. INTECH’s offshore services team took on the integration, startup, and commissioning of these systems; INTECH also integrated these systems into the Process Historian.

Upgrade of Refinery Automation Systems, Kuwait

The client here wanted to upgrade obsolete automation system installed on multiple applications at the facility. The upgrade had to be done as a hot cutover job, as some of the applications could not be shut down.

INTECH was selected as the Main Automation Contractor (MAC) by the customer to develop and execute a hot cutover procedure. The upgrade was performed on various units within the refinery including coke handling, water treatment plant, ship loading, and tank farms.

"Please transmit my sincere congratulations and thanks to your teams for the successful planned shutdown and restart of IME without any accidents... one day earlier than planned! Excellent team work!"

GM Field Offshore
INTECH supplies Remote Terminal Units and controllers specifically built for operation in harsh environments. Our engineering offices and manufacturing facilities work together to customize solutions for each site’s conditions.

INTECH also develops custom-built Human Machine Interfaces (HMIs) that are intuitive to use and match directly to plant, wellhead or pipeline operations. Our detailed operation views enable real-time operator-access to all relevant information. We integrate with data historians and Alarm & Event (A&E) repositories to facilitate activity tracking.

Our vendor-neutral approach ensures that INTECH SCADA solutions seamlessly integrate with any Proportional-Integral-Derivative (PID), Programmable Logic Controller (PLC), and Distributed Control System (DCS) whether standalone or part of a Central Control Room (CCR) infrastructure. Our SCADA Solutions cover:

1. Plant SCADA
2. Pipeline SCADA
3. Wellhead SCADA
Wellhead Automation and SCADA for Gas Field Development, Kuwait

INTECH automated 200 new and existing wells at an onshore gas field, providing RTUs with surge protection, ESD and F&G systems, and electro-hydraulic wellhead control panels. INTECH also delivered a complete SCADA system for this field including servers, clients, and networking equipment.

INTECH built the most advanced SCADA solution for this project, which included cybersecurity-enabled end-to-end implementation of a digital oilfield: from integrating sensors and RTUs to visualization on enterprise layer involving data centers, virtualized architectures, DMZ layer integration, and disaster recovery.

Gas Field Control Automation and SCADA, Pakistan

INTECH upgraded a major onshore gas field, providing enhanced control, supervision, and safety through a SCADA system, RTUs, and ICSS.

INTECH built its solution on ABB’s 800xA architecture, using it for the process control, safety, and SCADA systems. INTECH installed the main control system cabinets at the site’s CCR, from where these systems controlled all the hard-wired and third party signals coming from the field panels. The project team set up field communication to the CCR by erecting radio towers that enabled remote telemetry.

Pipeline SCADA, Automation and Telecommunication, Ecuador

The client here tasked INTECH with providing fully integrated SCADA for a 160km pipeline. To facilitate reliable communication across the network, INTECH built a fiber optic telecommunication network consisting of two self-healing rings. This entire setup was integrated into a CCR at the main facility. The SCADA system also integrated MCCs, third-party skids, leak-detection systems, power generation systems, and other plant applications.

"FAT was very organized and all the team involved displayed a good professional image. Also would like to thank INTECH Dubai for facilitating many things for us over there. INTECH Personnel are very helpful and well skilled engineers, not only did they perform their work to the best but also shared experience and helped in many other activities outside INTECH scope. Exceeded Expectations in services provided by INTECH, Quality of Software Design, Control Panels, FAT & Field Services."

Operations Manager
INTECH’s Wellhead Solutions cover the entire lifecycle of surface, subsurface, and subsea wellhead systems anywhere in the world from frozen Arctic fields to scorching Middle Eastern deserts. Our hydraulic control panels range from basic single-well panels to complex electro-hydraulic control panels covering multiple wells. We also provide RTUs, telemetry, subsea master control stations, and chemical injection skids for complete upstream automation. INTECH’s state of the art manufacturing facilities in USA and UAE coupled with regional offices around the world allow us to deliver projects in the shortest lead times possible.

1. Hydraulic Wellhead Control Panels
   - Electro-Hydraulic
   - Electro-Pneumatic
   - Hydraulic
2. Remote Terminal Units
3. Intelligent Well Control
4. Subsea Master Control Station
5. Chemical Injection Skids
6. Wellhead Power, Solar & Telecom
Long-Term Partnership For Single/Multi-Well Smart Well Control Panels

Under this partnership (spanning more than a decade now), INTECH has been providing Single/Multi-well Smart well head control panels and has delivered more than 250 panels so far from its state-of-the-art panel shops in Dubai and USA. Through this partnership, INTECH’s panels, deployed in scorching deserts and sub-zero fields, have helped oil and gas companies meet their production goals safely while ensuring compliance to regulatory standards.

Upgrade of Subsea Master Control Station, Equatorial Guinea

INTECH upgraded the subsea master control station (MCS) for an offshore oil field. The project encompassed both hardware and software upgrades for the MCS PLC, including the design of new HMI s, and implementation of new signals and relay logic.

INTECH also thoroughly documented existing hardware and systems before the upgrade.

Multi Wellhead Control Panels for Oil Field Expansion, Iraq

The customer here required nine single wellhead panels and six multi wellhead panels. The multi-wellhead panels for this project had the most complex circuitry INTECH had supplied in multi-wellhead panels until then. Each multi-wellhead panel had seven modules which were capable of controlling a cluster of wells within a well pad. INTECH adopted a modular design approach to add and remove wellhead circuitry as required. Each module of the multi wellhead panel controlled three hydraulic circuits, including a self-equalizing downhole valve, a master valve and a wing valve. This project helped INTECH show its capability to deliver complex multiwellhead hydraulic panels within customer deadlines while adhering to their requirements.

"Congratulations on successful commissioning. Great Team work, dedication & good planning for achieving this goal in targeted time. Appreciation for all the team members directly & indirectly involved in this project.”

Senior Instruments & Control Systems Engineer
INTECH’s field services provide long-term asset healthcare, maintenance, and upgrade services, ensuring sustained operation of assets for their planned life and beyond. Our project experience and knowledge of systems gives us significant advantage over a third-party O&M provider, reducing O&M risks and costs for the end user. With INTECH’s diverse expertise of multi-vendor control systems and industry applications, we help reduce the hassle of managing multiple service teams. A single INTECH resource is skilled at handling multiple systems – saving both finances and time.

**Services Scope**

**ON-CALL O&M SERVICES**
1. Global maintenance engineer deployment
2. Response time as early as 24 hours
3. Standard engineering, maintenance & optimization trainings
4. Support for remote locations

**REMOTE O&M SERVICES**
1. Immediate support, 24/7 availability
2. Connect with senior engineers & consultants

**O&M TRAINING SOLUTIONS**
1. Training for operators of key assets
2. Enable operator-driven reliability and field checks
3. Get solutions for any environment and control requirement
4. Deliver & enhance operations’ excellence

**FACILITY SURVEY & TROUBLESHOOTING**
1. Problem alarm baseline survey
2. Facility bottleneck survey
3. Loop optimization survey
4. Plant optimization survey

**RESIDENT/ONSITE O&M SERVICES**
1. Resident engineer with scheduled 40 hours/week on-site
2. Multi-disciplinary engineers
3. Standard engineering, maintenance & operations trainings
4. Support for remote locations
Selected Project References

Operation and Maintenance Services For an FPSO, Nigeria

The FPSO has multiple vendor equipment installed base with equipment as old as 15 years to new state of the art automation systems.

INTECH’s scope includes services for long term health care & maintenance, training of operators & engineers, startup and commissioning of new equipment/upgrades including multi-vendor supervision. INTECH helped with the first commissioning of this FPSO in 2006 and has since been proving O&M services on all electrical and control related systems on this FPSO.

I,C&E Operation And Maintenance Services For Entire Field Assets, Angola

INTECH has been working with this customer for over 10 years to provide operations and maintenance services for the instrumentation, control, and electrical systems at onshore and offshore production facilities and terminals. INTECH has been providing control system maintenance & firmware support, and documentation & procedure updates for asset classes including well jackets, gathering stations, storage, export, and refining. INTECH has also helped the customer’s operations team with design review and commissioning of major capital projects.

Resident Maintenance Engineers for Distributed Control Systems, Oman

INTECH’s resident maintenance engineers have been providing control system maintenance services on this project since 2006. INTECH’s team of 11 resident maintenance engineers is responsible for services on distributed process control and safety systems from multiple vendors. INTECH’s engineering team is responsible for overall systems’ maintenance & healthcare, logic design & modification, and routine maintenance checks & integration services.

“I would like to commend INTECH’s on-site team for going beyond individual primary responsibilities concerning facility operations & maintenance, as well as exhibiting a diverse skill set to progress towards project completion.”

Project Supervisor
To complement its control automation and field services, INTECH offers advanced software-based solutions that help optimize asset maintenance, operations, production, and processes. These solutions use algorithms and technology to augment plants by discovering operation & process synergies, rectifying poorly optimized control, and visualizing entire facilities to put everything in perspective for better decision support. These solutions get more out of people, processes, and technology, which helps increase reliability and decrease failures and losses significantly. INTECH’s Advanced Software Solutions include:

1. Alarm Management Systems
2. Control Loop Performance Optimization
3. Plant Information Management Systems
4. Overall Equipment Effectiveness
Plant Historians for 50 DCP (District Cooling Plant) Sites

INTECH provided PI-based Plant Historians to 49 DCP sites, and accumulated the data from these sites at a head office to store and display online trend data. The project included the engineering of an extensive tag database for thousands of tags per site, installation of PI systems, network & VPN configurations, and dashboards & visualization for PI clients. In Phase 1, INTECH undertook this task for 7 DCP sites and the customer’s head office. Phase 2 saw INTECH extending this activity on a larger scale to cover 42 more DCP sites.

Remote PI System Visualization and DMZ Configuration

INTECH set up Remote PI System Visualization, and Installation & configuration of DMZ at a gas plant. For this project INTECH engineered a PI system tag database connected and verified for over 20,000 pipeline data tags in an existing Siemens PCS7 system. The next step was the development of SCADA graphics for 700 screens to facilitate the remote visualization of plant assets through the PI system. INTECH also upgraded the PI server at the plant and installed a corporate PI server at the client’s head office. The team configured a secure PI-PI interface DMZ between the head office and plant sites, enabling remote visualization of real-time and historical activity at the head office.

Alarm Optimization and Installation of Alarm Management System

INTECH identified an opportunity for an alarm system improvement project to enhance the safety, reliability and profitability of a gas plant. For this project, INTECH analyzed over 8,000 alarmable tags and provided an Alarm Management Software, integrated with the plant’s DCS and safety system. INTECH also set up automated alarm system performance reporting for the plant’s operations and maintenance teams, and trained these teams on utilizing these systems to achieve Alarm Management Lifecycle. The D&R activity alone resulted in a 60% alarm count reduction.

Selected Project References

“InTECH was able to address a significant portion of the Alarm System issues we had at [the] Gas Plant through Rationalization of Alarms. They are very competent in complete Alarms Management Life Cycle.”

Plant Operator
INTECH covers the full range of engineered solutions for liquid and gas flow measurement. We provide accurate flow metering solutions for accounting and leak detection purposes. Our terminal management solutions include access control, batch measurements, custody transfer and stock reconciliation. Leak detection is accomplished using sophisticated software solution. Keeping these applications’ exclusive operational needs in mind, INTECH help deliver reliable and robust solutions customized to the needs of each customer with strict conformance to industry and OEM standards. These solutions include:

1. Terminal Management
2. Tank Gauging & Movement
3. Batch Management Systems
4. Pipeline Leak Detection Systems
Selected Project References

Electronic Gas Measurement, Validation & Analysis for Plant I-II

INTECH built an electronic fluid measurement system based on real-time calculations to help personnel at a gas plant readily assess gas property analyses for achieving higher quality composition for their customers. This system provided virtual flow measurement of orifice metering parameters from SCADA, validated flow measurements from flow computers against a central knowledge-base, estimated gas density, relative density and calorific values, and calculated off-spec reports for moisture, CO2, temperature, Nitrogen and HCDP. Customized current/daily/monthly reports ensure full visibility on these parameters. The solution also provided online real-time and historical trends of sales gas parameters against defined limits with alarms integrated into SCADA.

RTTM Based Leak Detection System

INTECH built an RTTM-based Leak Detection System as part of a pipeline network automation project. The project covered start-to-finish integration of the LDS and training of site personnel alongside the installation and commissioning of the pipeline monitoring and automation systems. These systems includes RTUs, field instrumentation (temperature transmitters, pressure transmitters & flow transmitters), wireless communication equipment and JBs.

Design and Supply of Crude Oil Custody Transfer Metering Skid

INTECH helped modernize an oil field’s metering station by building a crude oil metering skid complete with instrumentation and associated services. The project team delivered and installed the skid within their promised schedule, bringing the metering station up to acceptable performance levels and helping the customer in achieving their modernization goals.

“Impressed by the fact that information and drawings provided to INTECH were insufficient, but INTECH was able to draw on its experience to close the gaps. Exceeded Expectation in Project Management, Quality of Software Design & Delivery as per agreed schedule.”

Senior Project Engineer
Our project execution methodology ensures that customer needs are met cost effectively while remaining within the project deadlines. The core of our expertise lies with INTECH’s technically competent regional teams, which are responsible for customer engagement and project management right from scope definition to the final handover. The back-end engineering offices work in tandem with regional teams to ensure that solutions are delivered as per global best practices and compliant to statutory & regulatory requirements. Our front-end engineering teams work closely with customers and vendors to stay abreast of industry trends and advancements. Two centralized manufacturing facilities in Houston and Dubai ensure speedy project delivery across the world.

**Project Initiation**
01. Customer engagement & scope definition
02. Engineering, design, project management
03. Regional supply chain management

**Engineering Office**
04. Procurement
05. Technical support and sharing global best practices

**Project Delivery**
09. Installation and commissioning
10. SAT
11. Long-term maintenance and after-sales support

**Manufacturing Facilities**
06. Panel manufacturing
07. Internal QA and FAT
08. Packaging and shipment
Complete Lifecycle Services

- Conceptual Design / Feasibility Study
- Detail Design & Engineering
- PreFEED / FEED
- Operation & Maintenance
- Commissioning & Startup
- Testing IFAT / FAT
- Integration
- Lifecycle Management
- Project Management
- Data Management
- Standards
- Codes
- Integrated Application Systems
- Optimization
- Neutral Certifications
- Vendor

Safe & Reliable Operations

Best Fit Solutions

Efficient Delivery
INTECH’s competitive advantage also stems from its automation labs, used to adopt newer technologies, internal project testing, and personnel training. Over the years INTECH has enhanced and developed its automation lab to cover:

- R&D of state of the art technological process solutions
- Access to systems from major vendors like: SMAR, Honeywell, Rockwell, Yokogawa, Invensys, HIMA etc. to help our subject matter experts design and test best-fit solutions
- Training customers on the various systems and resources available
- Building employee competency through workshops on learning and adapting to newer systems

Vendor Expertise
INTECH’s success has been built on our ability to continuously improve our products and services. We ensure that our quality of service and execution for every project remains compliant to both international standards and customer-specific requirements. The quality standards of INTECH have been very instrumental in its continuous growth and development. To ensure these standards are maintained in all our offices, the company has a comprehensive set of procedures and frameworks that monitor customer satisfaction during the project execution lifecycle.

Country Managers lead all quality related matters with assistance from regional QHSE Leads. Evaluations for project teams are tied with their feedback scores, ensuring commitment towards customer satisfaction. The root cause for any issue is marked by incorporating feedback from all the stakeholders and identifying all sources that may have caused non-compliance. Corrective actions are identified, marked and implemented with consent of all parties involved. A log of issues encountered and lessons learnt is maintained for future reference. INTECH is certified by multiple international standardization bodies, and follows many more industrial standards to ensure quality.

### Standards & Complings

#### Safety Systems
- API RP14B
- API RP14C
- API RP14H
- IEC 61508
- IEC 61511
- SP 84

#### Hazardous Areas
- API RP14J
- API RP500
- API RP505
- IEC 60079
- NEC 500/505

#### Fire Systems
- NFPA72
- NFPA85
- NFPA86
- API RP14G
- IEC 60331
- IEC 60332

#### Classification Societies
- ABS
- DNV
- NACE
- BASEEEFA

#### NRTL/ Marks
- UL
- CSA
- CE

#### Others
- IEC 61131
- IEC 61000
- API RP14F
- EEMUA 201
- EEMUA 189
- NEC409
- NEC490

#### Enclosure Type
- NEMA250
- IEC60529

#### Other Bodies
- MMS
- USCG

#### Alarm Management
- EEMUA 191
Health, Safety and Environment at the INTECH have primary importance in every activity we perform. We are committed to deliver our projects and operational activities with no harm to employees, community, subcontractors, visitors and the environment as a whole. INTECH’s due diligence in maintaining and implementing the best practices and HSE procedures worldwide has ensured that our objectives of achieving international and national standards are met and exceeded.

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“The experience, knowledge and dedication of the INTECH Process Automation team was instrumental in executing a professional job towards the Control and Safety Systems of the project.”

Sr. I&E Engineer

“The experience, knowledge and dedication of the INTECH Process Automation team was instrumental in executing a professional job towards the Control and Safety Systems of the project.”

Sr. I&E Engineer

“I commend you on your efforts in customizing the business analysis software for trial deployment for a Web Based Alarm Management Dashboard. It meets our objectives and has produced the desired results.”

Control & Automation Leader

What Our Customers Say...

Commissioning Manager

End User

OEM

EPC

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